AMENDMENTS TO THE CLAIMS

Kindly amend the Claims, without prejudice, as shown below in the listing of claims. The listing of claims, shown below, will replace all prior versions, and listings, of claims in the instant Application:

Listing of Claims:

1. (Currently Amended) A pipe comprising;

an ethylene alpha-olefin interpolymer, wherein said ethylene alpha-olefin interpolymer has a density in the range of 0.925 to 0.965 g/cc, a melt index (I_2) in the range of 0.05 to 5 g/10 minutes; and

<u>an antioxidant system, wherein said antioxidant system</u> consists essentially of;

at least one antioxidant from a first class of antioxidants comprising a hindered phenol corresponding to the formula:

wherein R_1 and R_5 can independently be -CH₃, - CH(CH₃)₂, or -C(CH₃)₃, and R_2 , R_3 , and R_4 can independently be H, or any hydrocarbon or substituted hydrocarbon group, and wherein said antioxidant from the first class is characterized as being more than five percent soluble in a hexane solution at 20°C., and further characterized as having a hydrolyzed product that is more than five percent soluble in a hexane solution at 20°C.; and

at least one antioxidant from a second class of antioxidants comprising a hindered phenol corresponding to the formula:

$$R_2$$
 R_1 OH R_3 R_4

wherein R_3 and R_5 can be -CH₃, -CH(CH₃)₂, or -C(CH₃)₃, and R_4 can independently be H, or any hydrocarbon or substituted hydrocarbon group, provided that R_2 , R_3 and R_4 are chosen, such that the antioxidant does not contain the moiety Ph-CHR₆-Ph; or R_2 , R_3 and R_4 are chosen, such that the antioxidant does not contain the moiety Ph-CHR₆-Ph; or R_3 , R_3 and R_4 are chosen, such that the antioxidant does not contain the moiety Ph-CHR₆-; and wherein Ph represents a substituted or unsubstituted phenyl ring and R_6 can be H or a substituted or unsubstituted phenyl ring;

wherein said pipe has an F time in Jana Laboratories Procedure APTF-2 of at least 1000 hours, under the following conditions: pH 6.8 (±0.1); Chlorine 4.1 mg/L (±0.1); Nominal ORP 830mV; fluid temperature 110°C (±1); air temperature 110°C (±1); pressure 70 psig (±1); flow rate 0.1 US gallons/min (±10 percent).

A pipe capable of obtaining an F-time in Jana Laboratories Procedure APTF-2 of at least 1000 hours, under the following conditions: pH 6.8 (±0.1); Chlorine 4.1 mg/L (±0.1); Nominal ORF 830mV; fluid temperature 110°C (±1); air temperature 110°C (±1); pressure 70 psig (±1); flow rate 0.1 US gallons/min (±10 percent); said pipe comprising polyethylene having a density greater than about 0.925 g/cc, and wherein said pipe comprises an antioxidant system comprising two or more components, and wherein the antioxidant system includes at least one antioxidant from each of:

a) a first class of antioxidants comprising a hindered phenol corresponding to the formula:

wherein R_4 and R_5 can independently be CH_{37} $CH_{(CH_3)_{27}}$ or $C(CH_3)_{27}$ and R_2 , R_{37} and R_4 can independently be H_7 or any hydrocarbon or substituted hydrocarbon group; and

b) a second class of antioxidants comprising a hindered phenol corresponding to the formula:

wherein R_1 and R_3 can be CH_3 , $CH(CH_3)_2$, or $C(CH_3)_3$, and R_2 , R_3 , and R_4 can independently be H_7 or any hydrocarbon or substituted hydrocarbon group, provided that R_2 , R_3 and R_4 are chosen, such that the antioxidant does not contain the moiety Ph CHR_4 -Ph; or R_2 , R_3 and R_4 are chosen, such that the antioxidant does not contain the moiety Ph CHR_4 -P and wherein Ph represents a substituted or unsubstituted phenyl ring and R_4 can be H or a substituted or unsubstituted phenyl ring.

(Currently Amended) The pipe according to Claim 1, wherein said first class of antioxidants one of the antioxidant

system components provides extraction resistance and <u>said second</u> class of antioxidants another provides oxidation resistance.

- (Cancelled).
- 4. (Currently Amended) The pipe of Claim 3, wherein two or more antioxidants are selected from the group consisting of Pentaerythritol Tetrakis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate); 3,3',3'',5,5',5''-hexa-tert-butyl-alpha.,.alpha.',.alpha.''-(mesitylene-2,4,6-triyl)tri-p-cresol; and Octadecyl-3-(3,5-di-tert.butyl-4-hydroxyphenyl)-propionate Trganox 1010; Irganox 1330; and Irganox 1076.
- (Currently Amended) The pipe of Claim 3, wherein the antioxidant system further comprises of <u>Tris(2,4-ditert-</u> butylphenyl)phosphate. Trgafos 168.
 - 6. (Cancelled).
 - 7. (Cancelled).
- 8. (Currently Amended) The pipe of Claim $\frac{1}{2}$ 7, wherein the polyethylene ethylene alpha-olefin interpolymer is multimodal.
- 9. (Currently Amended) The pipe of Claim $\underline{1}$ 7, wherein the ethylene alpha-olefin interpolymer has a density in the range of $\underline{0.940}$ to 0.965 g/cc. density is greater than 0.940 g/cc.
- 10. (Currently Amended) The pipe of Claim $\underline{1}$ 7, wherein the ethylene alpha-olefin interpolymer polyethylene resin further comprises one or more metal deactivators.
- 11. (Currently Amended) The pipe of Claim $\underline{1}$ 7, wherein the $\underline{\text{ethylene}}$ alpha-olefin interpolymer polyethylene recein further comprises one or more phosphorous based stabilizers.
 - 12. (Cancelled).

13. (Currently Amended) The pipe of Claim 1, wherein said pipe has an F time in the range of in which the F time is greater than 1200 hours.

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